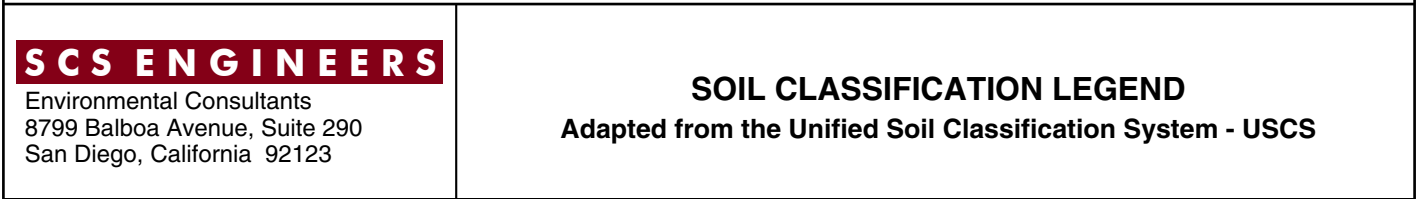


**APPENDIX 5.10**  
**Soil Boring/Well Completion Logs**



**SCS ENGINEERS**

Environmental Consultants  
8799 Balboa Avenue, Suite 290  
San Diego, California 92123

**BOREHOLE LOG**

Number:

**B1**

Client:

City of San Diego, Env. Services Dept.

Job No:

01203520.00

Sheet:

1 of 1

Location:

Mission Bay Landfill  
San Diego, California

Drilling Company:

H&amp;P Mobile Geochemistry

EBS Rep:

Karen Stackpole

Date Drilled:

6/16/04

Date Drafted:

6/16/04

Drill Rig/Sampling Method:

Strataprobe/Split spoon sampler

Borehole Dia.:

2"

Quantity of Backfill:

0.5 cu. ft.

Total Depth:

22'

**SAMPLE LOG****BOREHOLE LOG**

Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	Backfill Log
			0				<b>FILL</b>	
			1				Brown (7.5 YR 4/3), SILTY fine- to medium-grained SAND, trace coarse sand, loose.	
			2		SM			
			3					
			4				Brown (7.5 YR 4/3), CLAYEY SILT, trace fine-grained SAND, moderately dense, slightly moist.	
			5					
			6		ML			
			7					
B1-9'	N/A	N/A	8				Black (5 YR 2.5/1), SILTY fine-grained SAND.	
			9		SM			
			10					
B1-12'	N/A	N/A	11				Very dark gray (7.5 YR 3/1), SAND.	
			12		SP			
			13				Black (5 YR 2.5/1), CLAY, some silt, trace sand and mica, moist.	
			14				Black (5 YR 2.5/1), SILTY, fine-grained SAND, trace mica.	
			15					
			16				Black (5 YR 2.5/1), SILTY CLAY, trace mica.	
			17		CL/SM			
			18				Brown SILT, trace clay, dense.	
			19				Black, SILTY fine-grained SAND, trace clay, trace organics, very moist, organic odor.	
			20					
			21					
			22				Boring terminated at 22 feet below grade. Backfilled with bentonite granules and capped with existing soil.	
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					
			31					
			32					
			33					
			34					
			35					

Logged by: Karen Stackpole

Title: Project Professional

Date: 6/16/04

Reviewed by: Tessa McRae

License no: 6582

Date: 11/14/04

# SCS ENGINEERS

Environmental Consultants  
8799 Balboa Avenue, Suite 290  
San Diego, California 92123

## BOREHOLE LOG

Number:

**B2**

Client:

City of San Diego, Env. Services Dept.

Job No:

01203520.00

Sheet:

1 of 1

Location:

Mission Bay Landfill  
San Diego, California

Drilling Company:

H&P Mobile Geochemistry

EBS Rep:

Karen Stackpole

Date Drilled:

6/16/04

Date Drafted:

6/16/04

Drill Rig/Sampling Method:

Strataprobe/Split spoon sampler

Borehole Dia.:

2"

Quantity of Backfill:

0.5 cu. ft.

Total Depth:

22'

### SAMPLE LOG

### BOREHOLE LOG

Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	Backfill Log
			0				<b>FILL</b>	
			1				Dark reddish-brown (5 YR 3/3), SILTY, fine- to coarse-grained SAND, trace fine gravel, slightly moist, loose, with layer of reddish-yellow (5 YR 7/8) fine gravel and coarse-grained sand at 1 foot below grade.	
B2-4'	N/A	N/A	2		SM		Brown (7.5 YR 5/3), SILTY, fine-grained SAND, slightly moist.	
			3					
			4					
			5					
			6					
B2-8'	N/A	N/A	7		SC		Reddish-yellow (7.5 YR 7/8), CLAYEY SAND, dense, slightly moist, possible landfill material.	
			8				Wood fragments at 8 feet below grade (shell pieces/fragments).	
			9					
			10		SM		Brown (10 YR 4/3), fine-grained SAND and SILT.	
			11					
B2-14'	N/A	N/A	12					
			13				Black to reddish-brown, CLAYEY SAND, some layers of micaceous silt, moist.	
			14					
			15					
			16		SC		Clay layer.	
			17					
			18					
			19					
			20					
			21					
			22				Boring terminated at 22 feet below grade. Backfilled with bentonite grout and capped with soil.	
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					
			31					
			32					
			33					
			34					
			35					

Existing Soil

Bentonite Grout

Logged by: Karen Stackpole

Title: Project Professional

Date: 6/16/04

Reviewed by: Tessa McRae

License no: 6582

Date: 11/14/04

<div>SCS ENGINEERS</div> <div>Environmental Consultants</div> <div>8799 Balboa Avenue, Suite 290</div> <div>San Diego, California 92123</div>			<div>BOREHOLE LOG</div>				<div>Number:</div> <div>B3</div>					
<div>EBS Rep:</div> <div>Karen Stackpole</div>			<div>Client:</div> <div>City of San Diego, Env. Services Dept.</div>		<div>Job No:</div> <div>01203520.00</div>		<div>Sheet:</div> <div>1 of 1</div>					
			<div>Location:</div> <div>Mission Bay Landfill</div> <div>San Diego, California</div>		<div>Drilling Company:</div> <div>H&amp;P Mobile Geochemistry</div>							
<div>Date Drilled:</div> <div>6/16/04</div>		<div>Date Drafted:</div> <div>6/16/04</div>		<div>Drill Rig/Sampling Method:</div> <div>Strataprobe/Split spoon sampler</div>		<div>Borehole Dia.:</div> <div>2"</div>		<div>Quantity of Backfill:</div> <div>0.5 cu. ft.</div>		<div>Total Depth:</div> <div>20'</div>		
<div>SAMPLE LOG</div>			<div>BOREHOLE LOG</div>							<div>Backfill Log</div>		
<div>Sample Number</div>	<div>Lab results TPH Gas/diesel (ppm)</div>	<div>Blows per foot</div>	<div>Depth (feet)</div>	<div>Sample Interval</div>	<div>USCS symbol</div>	<div>Graphic Log</div>	<div>Geologic Description:</div> <div>Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.</div>					
			0					<div>FILL</div> <div>Strong brown (7.5 YR 5/6), fine-grained SAND, trace fine gravel, loose, dry.</div>				<div>Existing Soil</div>
			1		SP							
			2					<div>Brown (7.5 YR 5/6), SAND and SILT, friable.</div>				
			3									
			4		SM			<div>Brown (7.5 YR 5/6), SILTY, fine- to coarse-grained SAND, trace gravel.</div>				
			5									
B3-7'			6		CL			<div>Dusky red (10R 3/4), SILTY CLAY.</div>				
			7									
			8					<div>Fine-grained SAND, trace mica, poorly graded.</div>				
			9									
B3-11'			10		SP			<div>Reddish-brown, fine-grained SAND, dry.</div>				
			11									
			12					<div>Black to very dark gray (2.5 YR 3/1), CLAYEY SILT, trace mica, moist.</div>				
			13									
B3-16'			14					<div>Dark yellowish-brown (10 YR 3/4), SAND, dry, well graded, fine to coarse, trace silt and clay, trace mica.</div>				
			15									
			16		SW/ML			<div>Moist.</div>				
			17									
			18					<div>SILTY CLAY, trace mica, very moist to saturated.</div>				
			19									
			20					<div>Boring terminated at 20 feet below grade. Backfilled with bentonite grout and capped with soil.</div>				
			21									
			22									
			23									
			24									
			25									
			26									
			27									
			28									
			29									
			30									
			31									
			32									
			33									
			34									
			35									
<div>Logged by:</div> <div>Karen Stackpole</div>			<div>Title:</div> <div>Project Professional</div>			<div>Date:</div> <div>6/16/04</div>						
<div>Reviewed by:</div> <div>Tessa McRae</div>			<div>License no:</div> <div>6582</div>			<div>Date:</div> <div>11/14/04</div>						

**SCS ENGINEERS**

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8799 Balboa Avenue, Suite 290  
San Diego, California 92123

**BOREHOLE LOG**

Number:

**B4**

Client:

City of San Diego, Env. Services Dept.

Job No:

01203520.00

Sheet:

1 of 1

Location:

Mission Bay Landfill  
San Diego, California

Drilling Company:

H&amp;P Mobile Geochemistry

EBS Rep:

Karen Stackpole

Date Drilled:

6/17/04

Date Drafted:

6/17/04

Drill Rig/Sampling Method:

Strataprobe/Split spoon sampler

Borehole Dia.:

2"

Quantity of Backfill:

0.5 cu. ft.

Total Depth:

20'

**SAMPLE LOG****BOREHOLE LOG**

Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample Interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	Backfill Log
			0					
			1					
			2				SILTY, fine-grained SAND, trace mica.	
			3					
			4		SM		SILTY, fine-grained SAND, trace clay and mica.	
			5					
			6				SILTY, fine-grained SAND, trace clay and coarse-grained sand, trace shell fragments and mica.	
			7					
			8		SC		CLAYEY, fine- to coarse-grained SAND, trace mica.	
			9					
			10				Fine-grained, SANDY SILT, trace roots.	
			11		SM			
			12				Fine-grained, SANDY SILT, trace roots and mica.	
			13					
			14				Fine- to coarse-grained SAND, trace mica.	
			15		SW			
			16					
			17				SILTY fine-grained SAND, trace clay, trace mica.	
			18		SM			
			19					
			20				Boring terminated at 20 feet below grade. Backfilled with bentonite grout and capped with soil. No soil samples collected for chemical analysis, soil boring B4 advanced to south of soil boring B1 to attempt to refine lateral extent of landfill.	
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					
			31					
			32					
			33					
			34					
			35					

Existing Soil

Bentonite Grout

Logged by: Karen Stackpole

Title: Project Professional

Date: 6/17/04

Reviewed by: Tessa McRae

License no: 6582

Date: 11/15/04

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Environmental Consultants  
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San Diego, California 92123

**BOREHOLE LOG**

Number:

**B5**

Client:

City of San Diego, Env. Services Dept.

Job No:

01203520.00

Sheet:

1 of 1

Location:

Mission Bay Landfill  
San Diego, California

Drilling Company:

H&amp;P Mobile Geochemistry

EBS Rep:

Karen Stackpole

Date Drilled:

6/17/04

Date Drafted:

6/17/04

Drill Rig/Sampling Method:

Strataprobe/Split spoon sampler

Borehole Dia.:

2"

Quantity of Backfill:

0.5 cu. ft.

Total Depth:

20'

**SAMPLE LOG****BOREHOLE LOG**

Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	Backfill Log
			0				Asphalt.	
			1		SP		Very dark greenish-gray (Gley2, 3/1) and greenish black (Gley1, 2.5/1) SAND, trace silt, trace shell fragments, moist, loose.	
			2		SC		Layer of CLAYEY SAND from 1-1.5 feet below grade	
			3				Greenish-gray (Gley1, 5/1), SILTY SAND, pockets of iron oxide, becoming denser.	
			4		SM/ML			
			5				Black SILT, some sand, organic material at 5-6 feet below grade.	
			6					
			7				SAND, some organics, sulfur odor.	
			8		SP			
			9					
			10				Dark brown, SILTY, fine-grained SAND, trace mica.	
			11					
			12		SM			
			13					
			14				Dark brown, SILTY fine-grained SAND, trace clay, trace mica.	
			15					
			16					
			17				Black CLAYEY SILT, trace mica, trace wood.	
			18		ML			
			19					
			20				Boring terminated at 20 feet below grade. Backfilled with bentonite grout and capped with asphalt. No soil samples collected for chemical analysis, soil boring B5 advanced to east of soil boring B7 to attempt to refine lateral extent of landfill.	
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					
			31					
			32					
			33					
			34					
			35					

Logged by: Karen Stackpole

Title: Project Professional

Date: 6/17/04

Reviewed by: Tessa McRae

License no: 6582

Date: 11/15/04

<div>SCS ENGINEERS</div> <div>Environmental Consultants 8799 Balboa Avenue, Suite 290 San Diego, California 92123</div>			<div>BOREHOLE LOG</div>				Number: <div>B6</div>	
EBS Rep: <div>Karen Stackpole</div>			Client: <div>City of San Diego, Env. Services Dept.</div>		Job No: <div>01203520.00</div>		Sheet: <div>1 of 1</div>	
Date Drilled: <div>6/17/04</div>			Date Drafted: <div>6/17/04</div>		Drill Rig/Sampling Method: <div>Strataprobe/Split spoon sampler</div>		Drilling Company: <div>H&amp;P Mobile Geochemistry</div>	
Borehole Dia.: <div>2"</div>			Quantity of Backfill: <div>0.5 cu. ft.</div>		Total Depth: <div>20'</div>			
SAMPLE LOG			BOREHOLE LOG					Backfill Log
Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	
			0				Asphalt.	<div>Asphalt</div> <div>Bentonite Grout</div>
			1				Grayish-brown (10 YR 5/2) SAND, loose, slightly moist, narrow layer of black, friable material (possibly wood).	
			2				Very dark greenish-gray (Gley1, 3/1) SAND.	
			3				Black SILT, trace clay, trace mica.	
			4					
			5					
			6					
			7					
			8					
			9					
			10		SP/SM		Black, SILTY fine-grained SAND, slightly moist, trace mica.	
B6-5.5'	N/A	N/A	11					
			12				Black, SILTY fine-grained SAND, slightly moist, trace mica.	
			13					
			14					
			15					
			16					
			17					
			18					
B6-10'	N/A	N/A	19				Groundwater encountered at 19 feet below grade.	
			20				Boring terminated at 20 feet below grade. Backfilled with bentonite grout and capped with asphalt.	
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					
			31					
			32					
			33					
			34					
			35					
Logged by: <div>Karen Stackpole</div>			Title: <div>Project Professional</div>		Date: <div>6/17/04</div>			
Reviewed by: <div>Tessa McRae</div>			License no: <div>6582</div>		Date: <div>11/14/04</div>			



**SCS ENGINEERS**

Environmental Consultants  
8799 Balboa Avenue, Suite 290  
San Diego, California 92123

**BOREHOLE LOG**

Number:

**B7**

Client:

City of San Diego, Env. Services Dept.

Job No:

01203520.00

Sheet:

1 of 1

Location:

Mission Bay Landfill  
San Diego, California

Drilling Company:

H&amp;P Mobile Geochemistry

EBS Rep:

Karen Stackpole

Date Drilled:

6/17/04

Date Drafted:

6/17/04

Drill Rig/Sampling Method:

Strataprobe/Split spoon sampler

Borehole Dia.:

2"

Quantity of Backfill:

0.4 cu. ft.

Total Depth:

16'

**SAMPLE LOG****BOREHOLE LOG**

Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample Interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	Backfill Log
			0				Asphalt.	Asphalt
			1		SP		Very dark greenish-gray (Gley1, 3/1) SAND, some shell fragments, moist.	
			2		CL		SILTY CLAY, dense.	
B7-3.5'	N/A	N/A	3		SP		Very dark greenish-gray SAND.	Bentonite Grout
			4				Black SAND and SILT, trace fine gravel.	
			5		SM		Black, SILTY fine to coarse-grained SAND, trace shell fragments.	
			6		SW		Fine- to coarse-grained SAND, loose.	
			7		SM		Black to dark brown SILT, well graded fine to coarse-grained quartz SAND.	
			8		SP		Greenish-gray (Gley1, 3/1) SAND, trace shell fragments.	
B7-9'	N/A	N/A	9				Black SILTY SAND.	
			10		SM		Greenish-gray (Gley1 3/1), SILTY SAND, slightly moist.	
			11				Black SILTY SAND, moist.	
			12		SP		Greenish-gray (Gley1, 3/1) SAND.	
			13				Black SILTY SAND, moist.	
			14		SM			
			15				Saturated, groundwater encountered at 15 feet below grade.	
			16				Boring terminated at 16 feet below grade. Advanced slotted PVC temporary well screen for groundwater collection. Backfilled with bentonite grout after groundwater collection and removal of hydrated PVC. Boring capped with asphalt patch.	
			17					

Logged by: Karen Stackpole

Title: Project Professional

Date: 6/17/04

Reviewed by: Tessa McRae

License no: 6582

Date: 11/14/04

**SCS ENGINEERS**

Environmental Consultants  
8799 Balboa Avenue, Suite 290  
San Diego, California 92123

**BOREHOLE LOG**

Number:

**B8**

Client:

City of San Diego, Env. Services Dept.

Job No:

01203520.00

Sheet:

1 of 1

Location:

Mission Bay Landfill  
San Diego, California

Drilling Company:

H&amp;P Mobile Geochemistry

EBS Rep:

Karen Stackpole

Date Drilled:

6/17/04

Date Drafted:

6/17/04

Drill Rig/Sampling Method:

Strataprobe/Split spoon sampler

Borehole Dia.:

2"

Quantity of Backfill:

0.2 cu. ft.

Total Depth:

10'

**SAMPLE LOG****BOREHOLE LOG**

Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	Backfill Log
			0				Mulch.	Existing Mulch
					SP		Reddish-brown (5 YR 4/3) SAND.	
			1				Mulch.	Existing Mulch
					SP		Red SAND, shell fragments	
			2				Dark reddish-brown (5 YR 3/4), fine-grained SILTY SAND, trace clay, moist.	Bentonite Grout
							Black SILTY SAND.	
B8-3.5'	N/A	N/A	3				Reddish-brown (5 YR 3/4), SILTY SAND, dry and friable.	
			4					
			5					
			6		SM		Trace clay.	
			7					
			8				Reddish-brown (5 YR 3/4), SILTY SAND, trace clay, dry and friable.	
			9					
			10				Poor recovery.	
							Boring terminated at 10 feet below grade. Backfilled with bentonite grout and capped with existing mulch.	
			11					
			12					
			13					
			14					
			15					
			16					
			17					

Logged by: Karen Stackpole

Title: Project Professional

Date: 6/17/04

Reviewed by: Tessa McRae

License no: 6582

Date: 11/14/04

**SCS ENGINEERS**

Environmental Consultants  
8799 Balboa Avenue, Suite 290  
San Diego, California 92123

EBS Rep: Karen Stackpole

Date Drilled:  
6/17/04

Date Drafted:  
6/17/04

Drill Rig/Sampling Method:  
Strataprobe/Split spoon sampler

**BOREHOLE LOG**

Number:

**B9**

Client:  
City of San Diego, Env. Services Dept.

Job No:  
01203520.00

Sheet:  
1 of 1

Location:  
Mission Bay Landfill  
San Diego, California

Drilling Company:  
H&P Mobile Geochemistry

Borehole Dia.: 2"  
Quantity of Backfill: 0.4 cu. ft.  
Total Depth: 16'

**SAMPLE LOG****BOREHOLE LOG**

Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample Interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	Backfill Log
			0					
			1		SP		<b>FILL</b> Brown (7.5 YR 5/2) SAND, trace shell fragments, dry, loose (bermed area).	Existing Sand
			2					
			3					
			4				White (7.5 YR 8/1), SANDY SILT, loose, dry.	
			5					
			6				Black (Gley1, 2/5/), SILTY SAND, trace clay, 1 foot of recovery.	
			7				Black (Gley1, 2/5/), SILTY SAND and layers of white (7.5 YR 8/1) SANDY SILT, loose, strong hydrocarbon odor, 6 inches of recovery.	
			8		SM			
B9-9'	N/A	N/A	9					
			10					
			11				1 foot of recovery.	
			12					
			13				1 foot of recovery.	
			14				Full recovery in sleeves, moist.	
			15					
			16				Boring terminated at 16 feet below grade. Backfilled with bentonite grout and capped with existing sand.	
			17					

Logged by: Karen Stackpole Title: Project Professional Date: 6/17/04  
Reviewed by: Tessa McRae License no: 6582 Date: 11/14/04

<b>SCS ENGINEERS</b> Environmental Consultants 8799 Balboa Avenue, Suite 290 San Diego, California 92123			<b>BOREHOLE LOG</b>			Number: <b>B10</b>	
Client: City of San Diego, Env. Services Dept.			Job No: 01203520.00		Sheet: 1 of 1		
Location: Mission Bay Landfill San Diego, California			Drilling Company: H&P Mobile Geochemistry				
EBS Rep: Karen Stackpole			Date Drilled: 8/9/04		Date Drafted: 8/9/04		
Drill Rig/Sampling Method: Strataprobe/Split spoon sampler			Borehole Dia.: 2"		Quantity of Backfill: 0.5 cu. ft.		
					Total Depth: 20'		
<b>SAMPLE LOG</b>			<b>BOREHOLE LOG</b>				
Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample Interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.
			0				Mulch.
			1				
			2		SM		Light brown, SILTY SAND, trace shell fragments and brown clayey sand, 1.5 feet of recovery.
			3				Dark brown, SILTY SAND, moist, trace shell fragments.
			4				
B10-6'	N/A	N/A	5				Black with dark brown plastic SILTY CLAY, trace mica, 1/2 foot recovery.
			6				Black with dark brown plastic SILTY CLAY, trace mica, 1/2 foot recovery.
			7				
			8				
B10-10'	N/A	N/A	9				Black with dark brown plastic SILTY CLAY, trace mica, 1/2 foot recovery.
			10				Very dark brown CLAY, moist, 1/2 foot recovery.
			11		CL		
			12				
			13				
			14				Piece of black geotextile in sample (landfill liner fragment?) 2 inch recovery.
			15				
			16				
			17				Organic material.
			18				Moist.
			19				
			20				Collected sample from beneath interpreted water table.
			21				Boring terminated at 20 feet below grade. Backfilled with bentonite grout and capped with existing mulch.
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				
			31				
			32				
			33				
			34				
			35				
Logged by: Karen Stackpole			Title: Project Professional		Date: 8/9/04		
Reviewed by: Tessa McRae			License no: 6582		Date: 11/14/04		

<div style="background-color: #333; color: white; padding: 5px; font-weight: bold; font-size: 1.2em;">SCS ENGINEERS</div> <div style="padding: 5px;"> Environmental Consultants  8799 Balboa Avenue, Suite 290  San Diego, California 92123 </div>			BOREHOLE LOG				Number: <span style="font-size: 1.5em; font-weight: bold;">B11</span>							
			Client: <span style="font-weight: bold;">City of San Diego, Env. Services Dept.</span>		Job No: <span style="font-weight: bold;">01203520.00</span>		Sheet: <span style="font-weight: bold;">1 of 1</span>							
			Location: <span style="font-weight: bold;">Mission Bay Landfill San Diego, California</span>		Drilling Company: <span style="font-weight: bold;">H&amp;P Mobile Geochemistry</span>									
EBS Rep: <span style="font-weight: bold;">Karen Stackpole</span>			Date Drilled: <span style="font-weight: bold;">8/9/04</span>		Date Drafted: <span style="font-weight: bold;">8/9/04</span>		Drill Rig/Sampling Method: <span style="font-weight: bold;">Strataprobe/Split spoon sampler</span>		Borehole Dia.: <span style="font-weight: bold;">2"</span>		Quantity of Backfill: <span style="font-weight: bold;">0.5 cu. ft.</span>		Total Depth: <span style="font-weight: bold;">20'</span>	

SAMPLE LOG			BOREHOLE LOG				Backfill Log	
Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample interval	USCS symbol	Graphic Log		Geologic Description: <small>Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.</small>
			0				Mulch, organics.	Existing Mulch
			1				Brown, SILTY, fine to medium-grained SAND, dry, dense, trace mica and organics.	
			2					
			3				Brown, SILTY, fine- to medium-grained SAND, slightly moist, dense, trace mica and organics, good recovery.	
			4		SM		Reddish-brown SAND and SILT, dry, loose, trace organics and pieces of wood.	
			5					
			6					
			7				Brown, SILTY, fine-grained SAND, trace mica, loose.	
B11-7.5'	N/A	N/A	8		SP		Reddish-brown, fine-grained SAND.	
			9				Black, SILTY CLAY, moist, trace mica. Poor recovery from 8-10 feet below grade.	
B11-9.5'	N/A	N/A	10		CL			
			11				Black, SILTY, fine-grained SAND, trace mica, moist 1 foot recovery.	
			12				1 foot recovery, black SILTY fine SAND, trace mica, moist.	
			13					
			14					
			15		SM/ML		Poor recovery.	
			16					
			17				Black SILT with shell fragments, mixed with red-brown SAND and pieces of wood and organics, moist.	
			18				Sample saturated at 19 feet below grade, trace organics, poor recovery. Depth to groundwater measured at 19.6 feet below grade.	
			19					
			20				Boring terminated at 20 feet below grade. Backfilled with bentonite grout and capped with existing mulch.	
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					
			31					
			32					
			33					
			34					
			35					

Logged by: <span style="font-weight: bold;">Karen Stackpole</span>		Title: <span style="font-weight: bold;">Project Professional</span>		Date: <span style="font-weight: bold;">8/9/04</span>	
Reviewed by: <span style="font-weight: bold;">Tessa McRae</span>		License no: <span style="font-weight: bold;">6582</span>		Date: <span style="font-weight: bold;">11/14/04</span>	

**SCS ENGINEERS**

Environmental Consultants  
8799 Balboa Avenue, Suite 290  
San Diego, California 92123

**BOREHOLE LOG**

Number:

**B12**

Client:

City of San Diego, Env. Services Dept.

Job No:

01203520.00

Sheet:

1 of 1

Location:

Mission Bay Landfill  
San Diego, California

Drilling Company:

H&amp;P Mobile Geochemistry

EBS Rep:

Karen Stackpole

Date Drilled:

8/9/04

Date Drafted:

8/9/04

Drill Rig/Sampling Method:

Strataprobe/Split spoon sampler

Borehole Dia.:

2"

Quantity of Backfill:

0.5 cu. ft.

Total Depth:

22'

**SAMPLE LOG****BOREHOLE LOG**

Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample Interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	Backfill Log
			0				<b>FILL</b>	
			1		SP		Reddish-brown, coarse-grained SAND with some mulch at surface, dry, loose.	Asphalt
			2					
			3					
			4		SM		Brown, SILTY SAND, slightly moist, trace moist dark brown to black silty clay.	
			5					
B12-5.5'	N/A	N/A	6				Black, SILTY CLAY at 5.5 feet below grade, 1/2 foot recovery.	
			7					
			8		CL			
			9				Black, SILTY CLAY, trace sand, moist, 1 foot recovery.	
B12-9.5'	N/A	N/A	10				Trace mica present, 1 foot recovery.	
			11					
			12				Brown to light brown, SANDY SILT, slightly moist to dry, 1 foot recovery.	
			13					
			14				Brown, SILTY CLAY, slightly moist, friable, 1/2 foot recovery.	
			15					
			16				SILTY, fine-grained SAND, trace mica.	
			17		SM/ML			
			18				Black SILT with mica, moist, 3 inch recovery.	
			19					
			20				Groundwater encountered.	
			21					
			22				Boring terminated at 22 feet below grade. Backfilled with bentonite grout and capped with asphalt.	
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					
			31					
			32					
			33					
			34					
			35					

Logged by: Karen Stackpole

Title: Project Professional

Date: 8/9/04




Reviewed by: Tessa McRae

License no: 6582

Date: 11/14/04

<div style="background-color: #333; color: white; padding: 5px; font-weight: bold; font-size: 1.2em;">SCS ENGINEERS</div> <div style="padding: 5px;"> Environmental Consultants  8799 Balboa Avenue, Suite 290  San Diego, California 92123 </div>			BOREHOLE LOG				Number: <span style="font-size: 1.5em; font-weight: bold;">B13</span>							
			Client: <span style="font-weight: bold;">City of San Diego, Env. Services Dept.</span>		Job No: <span style="font-weight: bold;">01203520.00</span>		Sheet: <span style="font-weight: bold;">1 of 1</span>							
			Location: <span style="font-weight: bold;">Mission Bay Landfill San Diego, California</span>		Drilling Company: <span style="font-weight: bold;">H&amp;P Mobile Geochemistry</span>									
EBS Rep: <span style="font-weight: bold;">Karen Stackpole</span>			Date Drilled: <span style="font-weight: bold;">8/9/04</span>		Date Drafted: <span style="font-weight: bold;">8/9/04</span>		Drill Rig/Sampling Method: <span style="font-weight: bold;">Strataprobe/Split spoon sampler</span>		Borehole Dia.: <span style="font-weight: bold;">2"</span>		Quantity of Backfill: <span style="font-weight: bold;">0.5 cu. ft.</span>		Total Depth: <span style="font-weight: bold;">25'</span>	

SAMPLE LOG			BOREHOLE LOG				Backfill Log
Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample interval	USCS symbol	Graphic Log	
			0				
			1				
			2		SP		<b>FILL</b> Light brown SAND, loose, dry.
			3				
			4				SILTY SAND, slightly dense, slightly moist.
			5				
			6		SM		
			7				
B13-8'	N/A	N/A	8				
			9				Dark brown, SILTY CLAY, trace mica, slightly moist.
			10				
			11				
			12				
B13-14'	N/A	N/A	13				Poor recovery.
			14		SC		Advanced rods below 14 feet below grade to collect groundwater only, discontinued continuous sampling.
			15				
			16				
			17				
			18				
			19				
			20				
			21				
			22				
			23				
			24				
			25				Boring terminated at 25 feet below grade. Backfilled with bentonite grout and capped with existing soil.
			26				
			27				
			28				
			29				
			30				
			31				
			32				
			33				
			34				
			35				

Logged by: <span style="font-weight: bold;">Karen Stackpole</span>	Title: <span style="font-weight: bold;">Project Professional</span>	Date: <span style="font-weight: bold;">8/9/04</span>
Reviewed by: <span style="font-weight: bold;">Tessa McRae</span>	License no: <span style="font-weight: bold;">6582</span>	Date: <span style="font-weight: bold;">11/14/04</span>



**SCS ENGINEERS**

Environmental Consultants  
8799 Balboa Avenue, Suite 290  
San Diego, California 92123

EBS Rep: Karen Stackpole

Date Drilled:  
8/10/04

Date Drafted:  
8/10/04

Drill Rig/Sampling Method:  
Strataprobe/Split spoon sampler

Borehole Dia.:  
2"

Quantity of Backfill:  
0.5 cu. ft.

Total Depth:  
25'

**BOREHOLE LOG**

Number:  
**B14**

Client:  
City of San Diego, Env. Services Dept.

Job No:  
01203520.00

Sheet:  
1 of 1

Location:  
Mission Bay Landfill  
San Diego, California

Drilling Company:  
H&P Mobile Geochemistry

**SAMPLE LOG****BOREHOLE LOG**

Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample Interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	Backfill Log
			0					Existing Soil
			1					
			2		SP		Red, coarse-grained SAND, dry.	
			3					
			4		CL		Brown, SANDY CLAY, dense, slightly moist.	
			5					
			6				SILTY SAND.	
			7					
			8					
			9				Brown to reddish-brown, SILTY, fine-grained SAND, loose, slightly moist.	
			10					
B14-12'	N/A	N/A	11					
			12				Dark brown, refuse and large wood pieces, manure odor, moist.	
			13				2 foot recovery.	
			14					
			15		SM			
B14-16'	N/A	N/A	16				Black, SILTY SAND mixed with wood pieces.	
			17					
			18					
			19					
			20					
			21				Brown, SANDY SILT, loose, moist. Advanced to 25 feet below grade to collect groundwater sample.	
			22					
			23					
			24					
			25				Boring terminated at 25 feet below grade. Backfilled with bentonite grout and capped with existing soil.	
			26					
			27					
			28					
			29					
			30					
			31					
			32					
			33					
			34					
			35					

Logged by: Karen Stackpole Title: Project Professional Date: 8/10/04  
Reviewed by: Tessa McRae License no: 6582 Date: 11/14/04



**SCS ENGINEERS**

Environmental Consultants  
8799 Balboa Avenue, Suite 290  
San Diego, California 92123

**BOREHOLE LOG**

Number:

**B15**

Client:

City of San Diego, Env. Services Dept.

Job No:

01203520.00

Sheet:

1 of 1

Location:

Mission Bay Landfill  
San Diego, California

Drilling Company:

H&amp;P Mobile Geochemistry

EBS Rep:

Karen Stackpole

Date Drilled:

8/10/04

Date Drafted:

8/10/04

Drill Rig/Sampling Method:

Strataprobe/Split spoon sampler

Borehole Dia.:

2"

Quantity of Backfill:

0.7 cu. ft.

Total Depth:

35'

**SAMPLE LOG****BOREHOLE LOG**

Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	Backfill Log
			0					
			1				Yellowish-brown SAND with shell fragments, loose, dry.	
			2		SP		Dark brown SAND, friable, dry.	
			3					
			4		ML		Very dark brown SILT, moist.	
			5					
			6		SP		Brown to light brown, coarse-grained SAND, slightly loose.	
B15-7.5'	N/A	N/A	7		CL		Dark brown, SANDY CLAY, dense, slightly moist.	
			8					
			9				Reddish-brown, SILTY, fine- to medium-grained SAND, minor to trace clay, trace coarse-grained sand, slight moist.	
B15-11'	N/A	N/A	10					
			11		SM		Dark gray, SILTY SAND, loose, moist.	
			12					
			13					
			14					
			15					
			16				Black to dark gray CLAYEY SILT, trace clay and mica .	
			17					
			18					
			19					
			20					
			21				Advanced boring from 20 to 35 feet below grade without soil sampling to collect groundwater.	
			22					
			23					
			24		ML			
			25					
			26					
			27					
			28					
			29					
			30					
			31					
			32					
			33					
			34					
			35				Boring terminated at 35 feet below grade. Backfilled with bentonite grout and capped with existing soil.	

Logged by: Karen Stackpole

Title: Project Professional

Date: 8/10/04

Reviewed by: Tessa McRae

License no: 6582

Date: 11/14/04

<div style="background-color: #333; color: white; padding: 5px; font-weight: bold; font-size: 1.2em;">SCS ENGINEERS</div> <div style="font-size: 0.9em;">Environmental Consultants 8799 Balboa Avenue, Suite 290 San Diego, California 92123</div>			BOREHOLE LOG			Number: <span style="font-size: 1.5em; font-weight: bold;">B16</span>					
			Client: <span style="font-weight: bold;">City of San Diego, Env. Services Dept.</span>			Job No: <span style="font-weight: bold;">01203520.00</span>		Sheet: <span style="font-weight: bold;">1 of 1</span>			
			Location: <span style="font-weight: bold;">Mission Bay Landfill San Diego, California</span>			Drilling Company: <span style="font-weight: bold;">H&amp;P Mobile Geochemistry</span>					
EBS Rep: <span style="font-weight: bold;">Karen Stackpole</span>			Drill Rig/Sampling Method: <span style="font-weight: bold;">Strataprobe/Split spoon sampler</span>			Borehole Dia.: <span style="font-weight: bold;">2"</span>		Quantity of Backfill: <span style="font-weight: bold;">0.7 cu. ft.</span>		Total Depth: <span style="font-weight: bold;">35'</span>	
Date Drilled: <span style="font-weight: bold;">8/10/04</span>			Date Drafted: <span style="font-weight: bold;">8/10/04</span>								

SAMPLE LOG			BOREHOLE LOG				Backfill Log
Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample interval	USCS symbol	Graphic Log	
			0				
			1				<b>FILL</b>
			2				Brown, fine to coarse-grained SAND and SILT, friable and dry.
			3				
			4		SM		
			5				
			6				
			7				
			8				
			9		SC		Red, CLAYEY, fine- to coarse-grained SAND, trace silt, dense, slightly dry.
			10				Reddish-brown, SILTY, fine- to coarse-grained SAND, trace fine gravel, slightly loose, moist, musty odor.
B16-12'	N/A	N/A	11				Black, SILTY CLAY, very moist.
			12				
			13				
			14				
B16-16'	N/A	N/A	15				Sample collected from above interpreted landfill material. Trash (newspaper, glass) and fuel odor and sulfur odor. Black SILTY SAND, musty odor.
			16				
			17				
			18				
			19				
			20				
			21				Black, SILTY CLAY, very moist.
			22		SM/CL		
			23				Groundwater encountered.
			24				
			25				
			26				
			27				
			28				
			29				
			30				
			31				
			32				
			33				
			34				
			35				Boring terminated at 35 feet below grade. Backfilled with bentonite grout and capped with asphalt.

Logged by: <span style="font-weight: bold;">Karen Stackpole</span>		Title: <span style="font-weight: bold;">Project Professional</span>		Date: <span style="font-weight: bold;">8/10/04</span>	
Reviewed by: <span style="font-weight: bold;">Tessa McRae</span>		License no: <span style="font-weight: bold;">6582</span>		Date: <span style="font-weight: bold;">11/14/04</span>	

**SCS ENGINEERS**

Environmental Consultants  
8799 Balboa Avenue, Suite 290  
San Diego, California 92123

**BOREHOLE LOG**

Number:

**B17**

Client:

City of San Diego

Job No:

01203520.00

Sheet:

1 of 1

Location:

Sea World Drive/Mission Bay Park  
San Diego, California

Drilling Company:

Test America

EBS Rep:

Keith Etchells

Date Drilled:

10/13/04

Date Drafted:

10/13/04

Drill Rig/Sampling Method:

CME-75 Track LAR/HSA Split Spoon Sampler

Borehole Dia.:

8"

Quantity of Backfill:

12 ft<sup>3</sup>

Total Depth:

35'

**SAMPLE LOG****BOREHOLE LOG**

Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample Interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	Backfill Log
			0					
			1					
			2		SP		White (2.5 Y 8/1), fine- to medium-grained SAND, trace silt, some-trace bivalve shells and shell fragments, trace organics, dry, no odor.	Concrete
			3					
			4					
			5	X				
		12/13/14	6	X			Black (2.5 Y 2.5/1), SILTY, fine- to medium-grained SAND, trace clay, trace shell fragments, moist, no odor. PID @ 0.1 ppm.	
			7					
			8					
			9					
			10	X				
			11	X			Black (2.5 Y 2.5/1), SILTY, fine- to medium-grained SAND, trace clay, trace shell fragments, moist, no odor.	
			12					
			13					
			14					
			15	X				
		11/19/22	16	X	SM		Black (2.5 Y 2.5/1), SILTY, fine- to medium-grained SAND, trace clay, trace shell fragments, moist, no odor, trash in cuttings (shoe insole, metal scraps, etc). PID @ 0.0 ppm.	Bentonite Granules
			17					
			18					
			19					
			20					
			21				Black (2.5 Y 2.5/1,) SILTY, fine- to medium-grained SAND, trace clay, trace shell fragments, moist, no odor, some-trace fibrous wood fragments in cuttings.	
			22					
			23					
			24					
			25					
			26					
			27				Black (2.5 Y 2.5/1), SILTY, fine- to medium-grained SAND, trace clay, trace shell fragments, moist-wet, no odor, less wood, water encountered in hole at 27 feet below grade and rising.	
			28					
			29					
			30					
			31				Black (2.5 Y 2.5/1) SILTY, fine- to medium-grained SAND, trace clay, trace shell fragments, less silt, wet, no odor.	
			32		SP-SM			
			33					
			34					
			35				Boring terminated at 35 feet below grade. Temporary well constructed in borehole, groundwater sample collected.	

Logged by: Keith Etchells

Title: Staff Geologist

Date: 10/13/04

Reviewed by: Tessa McRae

License no: 6582

Date: 4/12/05

<div style="background-color: #333; color: white; padding: 5px; font-weight: bold; font-size: 1.2em;">SCS ENGINEERS</div> <div style="padding: 5px;"> Environmental Consultants  8799 Balboa Avenue, Suite 290  San Diego, California 92123 </div>			BOREHOLE LOG			Number: <span style="font-size: 1.5em; font-weight: bold;">B18</span>								
			Client: <span style="font-size: 1.1em;">City of San Diego</span>		Job No: <span style="font-size: 1.1em;">01203520.00</span>		Sheet: <span style="font-size: 1.1em;">1 of 1</span>							
			Location: <span style="font-size: 1.1em;">Sea World Drive/Mission Bay Park San Diego, California</span>		Drilling Company: <span style="font-size: 1.1em;">Test America</span>									
EBS Rep: <span style="font-size: 1.1em;">Keith Etchells</span>			Date Drilled: <span style="font-size: 1.1em;">10/14/04</span>		Date Drafted: <span style="font-size: 1.1em;">10/14/04</span>		Drill Rig/Sampling Method: <span style="font-size: 1.1em;">CME-75 Track LAR/HSA Split Spoon Sampler</span>		Borehole Dia.: <span style="font-size: 1.1em;">8"</span>		Quantity of Backfill: <span style="font-size: 1.1em;">10.5 ft<sup>3</sup></span>		Total Depth: <span style="font-size: 1.1em;">30'</span>	

SAMPLE LOG			BOREHOLE LOG				Backfill Log
Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	
			0			Pale brown (10 YR 6/3), SILT, trace fine-grained sand and mica, dry.	Concrete
			1	ML		Pale brown (10 YR 6/3), SILT, trace fine-grained sand and mica, dry.	
			2				
			3			Grayish-brown (10 YR 5/2), poorly graded, very fine-grained SAND, trace mica, dry, no odor. PID @ 0.0 ppm.	Bentonite Granules
		8/9/12	4	SP		Dark grayish-brown (10 YR 4/2), poorly graded, very fine-grained SAND, trace mica, dry-moist, no odor. PID @ 0.0 ppm.	
		13/11/14	5				
			6			Very dark gray (10 YR 3/1), SILTY CLAY, trace mica, moist, no odor. PID @ 0.0 ppm.	
		12/14/13	7	CL		Black (10 YR 2/1), SILTY CLAY, trace mica, moist, no odor. PID @ 0.0 ppm.	
		10/9/8	8				
			9				
		12/18/20	10				
			11			Black (10 YR 2/1), SILTY CLAY, trace mica, moist, trace root fragments, no odor.	
		11/13/15	12			Black (10 YR 2/1), CLAYEY SILT, trace mica, moist, no odor.	
			13	MH			
		12/14/18	14				
		13/15/11	15				
			16				
		12/13/18	17			Gray (GLE Y1 5N), poorly graded, very fine-grained SAND, trace mica, moist, no odor. PID @ 0.0 ppm.	
		8/9/11	18				
			19	SP		Gray (GLE Y1 5N) poorly graded, very fine-grained SAND, trace mica, wet, no odor.	
B18-20'		9/13/15	20				
		13/15/17	21				
			22				
		17/18/21	23				
			24				
B18-25'		22/23/24	25				
		22/19/17	26				
			27				
		16/18/20	28				
		11/16/18	29				
			30			Boring terminated at 30 feet below grade. Temporary well constructed in borehole, groundwater sample collected.	
			31				
			32				
			33				
			34				
			35				

Logged by: <span style="font-size: 1.1em;">Keith Etchells</span>	Title: <span style="font-size: 1.1em;">Staff Geologist</span>	Date: <span style="font-size: 1.1em;">10/14/04</span>
Reviewed by: <span style="font-size: 1.1em;">Tessa McRae</span>	License no: <span style="font-size: 1.1em;">6582</span>	Date: <span style="font-size: 1.1em;">4/12/05</span>

**SCS ENGINEERS**

Environmental Consultants  
8799 Balboa Avenue, Suite 290  
San Diego, California 92123

**WELL LOG**

Number:

**SCS1**

Client:

City of San Diego

Job No:

01203520.00

Sheet:

1 of 1

Location:

Sea World Drive/Mission Bay Park  
San Diego, California

Drilling Company:

Test America

EBS Rep:

Keith Etchells

Date Drilled:

9/13/04

Date Drafted:

9/13/04

Drill Rig/Sampling Method:

CME-75/HSA Split Spoon Sampler

Borehole Dia.:

8"

Casing Dia.:

2"

Total Depth:

36'

**SAMPLE LOG****BOREHOLE LOG**

Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample Interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	
Hand auger cuttings			0				0 - 2 inches below grade, Mulch and plant roots.	
			1				2 inches - 4.5 feet below grade	
			2				Dark grayish-brown (10 YR 4/2), SILTY, very fine- to medium-grained SAND, some-trace organics (roots), trace clay, dry-moist, no odor.	
			3					
			4					
SCS1-5'	NA/NA	23/35/35	5		SM		Very dark grayish-brown (10 YR 3/2), SILTY, fine- to coarse-grained SAND, trace clay, trace subangular quartz cobble fragments, dry-moist, no odor.	
			6				6 feet below grade, auger chatter (subrounded gravel and cobbles). Very thin plastic fragments in black (10 YR 2/1), SILTY, very fine- to fine-grained SAND, trace clay.	
			7					
			8					
SCS1-10'	NA/NA	7/12/22	9					
			10		CL		Black (10 YR 2/1), SILTY CLAY, trace mica, moist, no odor. PID @ 0.3 ppm.	
			11					
			12					
			13					
SCS1-15'	NA/NA	50/2"	14		?		1st attempt, no recovery (wood in shoe). 2nd attempt, black fibrous wood in shoe, petroleum odor. PID @ 73.8 ppm.	
			15					
			16					
SCS1-17'	NA/NA	17/18/19	17				No recovery with sample catcher, auger cuttings are black, SILTY CLAY, trace mica, wet (sampler).	
			18					
			19					
SCS1-20'	NA/NA	10/10/10	20		SP		Very dark gray (10YR 3/1), fine- to medium-grained SAND, trace mica, wet, no odor. PID @ 0.0 ppm.	
			21					
			22					
			23					
			24					
SCS1-25'	NA/NA	10/10/10	25		MH		Very dark gray (10YR 3/1), CLAYEY SILT, trace mica, wet, no odor. PID @ 0.0 ppm.	
			26					
			27					
			28					
			29					
SCS1-30'	NA/NA	4/6/8	30		CL		Very dark gray (10YR 3/1), SILTY CLAY, trace mica, sulfur odor. PID @ 0.0 ppm.	
			31					
			32					
			33					
			34					
			35					

Boring terminated at 36 feet below grade.

Logged by: Keith Etchells

Title: Staff Geologist

Date: 9/13/04

Reviewed by: Tessa McRae

License no: 6582

Date: 9/27/04

**SCS ENGINEERS**

Environmental Consultants  
8799 Balboa Avenue, Suite 290  
San Diego, California 92123

**WELL LOG**

Number:

**SCS2**

Client:

City of San Diego

Job No:

01203520.00

Sheet:

1 of 1

Location:

Sea World Drive/Mission Bay Park  
San Diego, California

Drilling Company:

Test America

EBS Rep:

Keith Etchells

Date Drilled:

9/14/04

Date Drafted:

9/14/04

Drill Rig/Sampling Method:

CME-75/HSA Split Spoon Sampler

Borehole Dia.:

8"

Casing Dia.:

2"

Total Depth:

36'

**SAMPLE LOG****BOREHOLE LOG**

Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.	
Hand auger cuttings			0				0 - 2 inches below grade, Mulch and plant roots.	
			1				2 inches - 5 feet below grade	
			2				Brown (10 YR 5/3), SILTY, fine- to medium-grained SAND, trace	
			3				organics (roots), dry, no odor.	
			4		SM			
			5					
		7/7/5	6				No recovery with sample catcher.	
			7					
SCS2-7'	NA/NA	5/3/3	8				Dark gray (2.5 Y 4/1), very fine-grained SAND, trace fine-grained	
			9				sand and silt, trace mica, moist, no odor. PID @ 0.0 ppm.	
SCS2-10'	NA/NA	25/ 50/6"	10					
			11				Light gray (Gley1 7/N), poorly graded fine-grained SAND, trace	
			12				shell fragments, moist, no odor. PID @ 0.0 ppm.	
			13		SP			
			14					
SCS2-15'	NA/NA	20/20/20	15				Light gray (Gley1 7/N), poorly graded fine-grained SAND, trace	
			16				shell fragments, moist, no odor. PID @ 0.0 ppm.	
			17					
			18					
SCS2-20'	NA/NA	6/10/15	20				Very dark greenish-gray (Gley1 3/10Y), SILTY, very fine-grained	
			21				SAND, some mica (phlogopite), wet, no odor. PID @ 0.0 ppm.	
			22					
			23					
			24					
SCS2-25'	NA/NA	10/10/18	25				Very dark greenish-gray (Gley1 3/10Y), SILTY, very fine-grained	
			26				SAND, some mica (phlogopite), wet, no odor. PID @ 0.0 ppm.	
			27		SM			
			28					
			29					
SCS2-30'	NA/NA	18/18/25	30				Very dark greenish-gray (Gley1 3/10Y), SILTY, very fine-grained	
			31				SAND, some mica (phlogopite), wet, no odor. PID @ 0.0 ppm.	
			32					
			33					
			34				Very dark greenish-gray (Gley1 3/10Y), SILTY, very fine-grained	
SCS2-35'	NA/NA	10/10/10	35				SAND, some mica (phlogopite), wet, no odor. PID @ 0.0 ppm.	
							Boring terminated at 36 feet below grade.	

Concrete

Bentonite

Bentonite

Seal

Grout

Sand

Sump

Logged by: Keith Etchells

Title: Staff Geologist

Date: 9/14/04

Reviewed by: Tessa McRae

License no: 6582

Date: 9/27/04



<div style="background-color: #333; color: white; padding: 5px; font-weight: bold; font-size: 1.2em;">SCS ENGINEERS</div> <div style="font-size: 0.8em; margin-top: 5px;"> Environmental Consultants  8799 Balboa Avenue, Suite 290  San Diego, California 92123 </div>			WELL LOG				Number: <span style="font-size: 1.2em; font-weight: bold;">SCS3</span>							
			Client: <span style="font-size: 1.1em;">City of San Diego</span>		Job No: <span style="font-size: 1.1em;">01203520.00</span>		Sheet: <span style="font-size: 1.1em;">1 of 1</span>							
			Location: <span style="font-size: 1.1em;">Sea World Drive/Mission Bay Park San Diego, California</span>		Drilling Company: <span style="font-size: 1.1em;">Test America</span>									
EBS Rep: <span style="font-size: 1.1em;">Keith Etchells</span>			Date Drilled: <span style="font-size: 1.1em;">9/13/04</span>		Date Drafted: <span style="font-size: 1.1em;">9/13/04</span>		Drill Rig/Sampling Method: <span style="font-size: 1.1em;">CME-75/HSA Split Spoon Sampler</span>		Borehole Dia.: <span style="font-size: 1.1em;">8"</span>		Casing Dia.: <span style="font-size: 1.1em;">2"</span>		Total Depth: <span style="font-size: 1.1em;">31'</span>	

SAMPLE LOG				BOREHOLE LOG			
Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample interval	USCS symbol	Graphic Log	Geologic Description: <small>Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.</small>
Hand auger cuttings			0				0 - 1 inch below grade, Mulch.
			1				1 inch - 4.5 feet below grade
			2				Brown (10 YR 5/3), SILTY, fine-grained SAND, trace roots, shell fragments, no odor.
			3				
			4				
SCS3-5'	NA/NA	50/6"	5				<b>FILL</b> Brown (10 YR 4/3), SILTY, fine-grained SAND, trace clay, trace organics (roots), trace shell fragments, trace trash in auger cuttings (paper, tin can fragments), no odor. PID @ 0.0 ppm.
			6				
			7				
			8				
SCS3-10'	NA/NA	50/6"	9		SM		
			10				Black wood in shoe (PID @ 54.7 ppm.)
			11				Soil in sampler (brown, SILTY, fine-grained SAND, trace shell fragments, no odor. PID @ 8.3 ppm).
			12				
			13				
			14				
		50/6"	15				No recovery. In shoe of sampler black/brown SILTY, very fine- to medium-grained SAND, trace clay and fine gravel, wet, sampler wet, no odor. PID @ 0.0 ppm.
			16				
			17				
			18				
SCS3-20'	NA/NA	50/6"	19				
			20				Black (10 YR 2/1), fine- to medium-grained SAND, wet. PID @ 0.3 ppm.
			21				
			22		SP		
			23				
			24				
SCS3-25'	NA/NA	50/6"	25				Black (10 YR 2/1), fine- to medium-grained SAND, wet. PID @ 0.0 ppm.
			26				
			27				
			28				
			29				
			30		CL		Black (10 YR 2/1), SILTY CLAY, trace mica, wet, no odor. PID @ 0.0 ppm.
SCS3-30'	NA/NA	12/14/10	31				
			32				Boring terminated at 31 feet below grade.
			33				
			34				
			35				

Logged by: Keith Etchells  
Reviewed by: Tessa McRae

Title: Staff Geologist  
License no: 6582

Date: 9/13/04  
Date: 9/27/04

Concrete

Bentonite

Riser

Seal

Sand

Sump

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 30%;"> <b>SCS ENGINEERS</b>  Environmental Consultants  8799 Balboa Avenue, Suite 290  San Diego, California 92123 </div> <div style="width: 40%; text-align: center;"> <h1 style="margin: 0;">WELL LOG</h1> </div> <div style="width: 30%; text-align: right;"> Number: <b>SCS4</b> </div> </div>			Client:		Job No:		Sheet:				
			City of San Diego		01203520.00		1 of 1				
EBS Rep: <b>Keith Etchells</b>			Location:		Drilling Company:						
			Sea World Drive/Mission Bay Park San Diego, California		Test America						
Date Drilled:		Date Drafted:		Drill Rig/Sampling Method:		Borehole Dia.:		Casing Dia.:		Total Depth:	
9/14/04		9/14/04		CME-75/HSA Split Spoon Sampler		8"		2"		31'	

SAMPLE LOG				BOREHOLE LOG			
Sample Number	Lab results TPH Gas/diesel (ppm)	Blows per foot	Depth (feet)	Sample Interval	USCS symbol	Graphic Log	Geologic Description: Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.
Hand auger cuttings			0				0 - 2 inches below grade, Mulch.
			1				2 inches - 4.5 feet below grade
			2		SM		Dark grayish-brown (10 YR 4/2), SILTY, fine- to medium-grained SAND, some-trace organics (roots), trace clay, dry, no odor.
			3				
			4				
SCS4-5'	NA/NA	10/10/7	5				Very dark gray (10 YR 3/1), SILTY CLAY, trace mica, moist, no odor. PID @ 0.0 ppm.
			6				
			7				
			8				
SCS4-10'	NA/NA	4/9/12	9				
			10		CL		Black (10 YR 2/1), SILTY CLAY, trace mica, moist-wet, no odor. PID @ 0.0 ppm.
			11				
			12				
			13				
SCS4-15'	NA/NA	25/50/6"	14				
			15				Black (10 YR 2/1), SILTY CLAY, trace mica, fragments of black geotextile (landfill liner?), wet, no odor.
			16				
			17				
			18				
SCS4-20'	NA/NA	10/10/10	19				
			20		SW		Black (10 YR 2/1), fine- to coarse-grained SAND, well graded, trace silt and root fragments, wet, no odor. PID @ 0.0 ppm.
			21				
			22				
			23				
			24				
SCS4-25'	NA/NA	50/6"	25				
			26		ML		Very dark gray (10 YR 3/1), SILT, trace clay and mica, wet, no odor. PID @ 0.0 ppm.
			27				
			28				
			29				
SCS4-30'	NA/NA	29/50/6"	30		SP		Very dark gray (10 YR 3/1), medium- to coarse-grained SAND, trace shell fragments and mica, wet, no odor. PID @ 0.0 ppm.
			31				Boring terminated at 31 feet below grade.
			32				
			33				
			34				
			35				

Logged by: <u>Keith Etchells</u>	Title: <u>Staff Geologist</u>	Date: <u>9/14/04</u>
Reviewed by: <u>Tessa McRae</u>	License no: <u>6582</u>	Date: <u>9/27/04</u>



# MONITORING WELL CONSTRUCTION DETAILS

Standard Operating Procedure Number 4, Figure 1  
Revision A. 2/11/00



## STAND PIPE or RISER WELL

PROJECT NUMBER: 01203520.00

BORING / WELL NUMBER: SCS1

SITE: MBLF

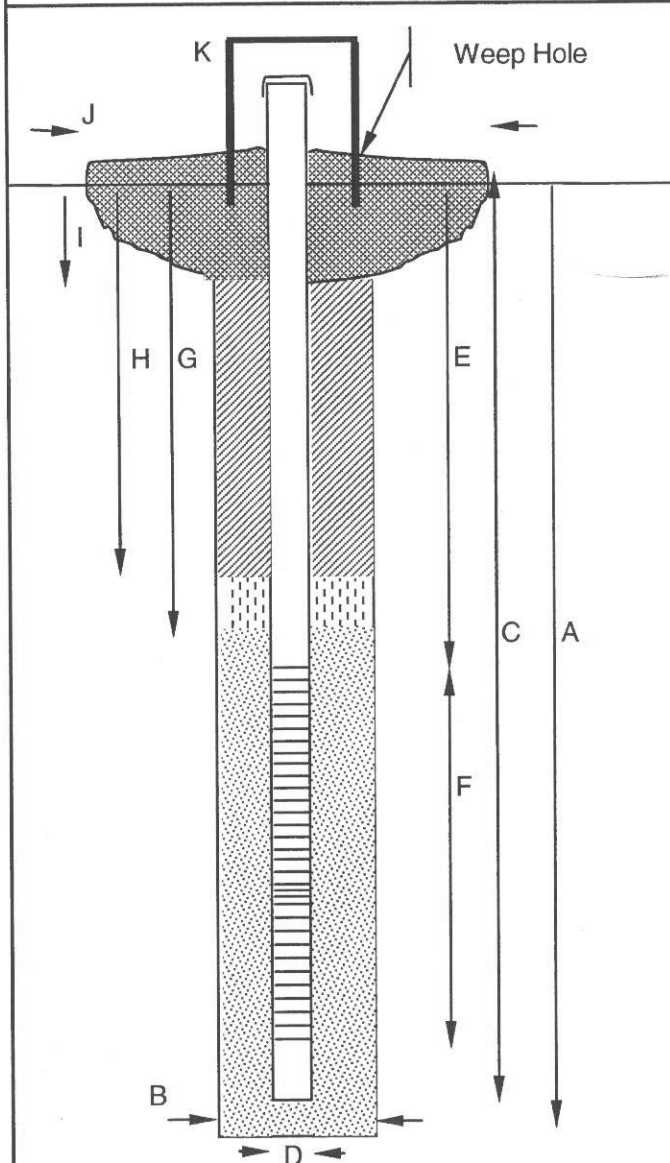
CLIENT: City of San Diego

COUNTY & PERMIT #: LMON102307

DATE OF INSTALLATION: 9/13/04

DRILLER: WEST HAZMAT

PREPARED BY: KLE



Sketch the stratigraphic section from your boring log beside the well construction diagram.

### CONSTRUCTION DETAILS

- Surface Elevation 19.42 ft.
- Top of Casing Elevation 22.434 ft.
- A. Total Depth 35 ft.
- B. Boring Diameter 8 in.
- C. Casing Length 36.5 ft.
- Casing Material Sch 40 PVC
- D. Casing Diameter 2 in.
- E. Depth to Top of Screen 16 ft.
- F. Screen Length 15 ft.
- Screen (slot) Size 0.010 in.
- G. Depth to top of Filter Pack 14 ft.
- Filter Pack Material #2/12 Sand
- H. Depth to top of Seal 11 ft.
- Seal Material Hyd. bent. chips
- I. Depth to Top of Fill Material 3 ft.
- Annular Fill Material Bentonite grout
- J. Surface Seal Dimensions 3 ft.
- Radial or Square or Other Radial
- Surface Seal Material Concrete
- K. Type and Size of Protective Casing: 8" DIAMETER STICKUP

Notes or comments:

5 bags of sand  
1 bag of bentonite chips (hyd.)  
1 bag of grout  
15 bags of concrete.

Prepared by: KEITH ETHELLES

Date: 9/13/04

Reviewed by:

Terrence Miller Date: 9/27/04

# MONITORING WELL CONSTRUCTION DETAILS

Standard Operating Procedure Number 4, Figure 1  
Revision A. 2/11/00



## STAND PIPE or RISER WELL

<p>PROJECT NUMBER: <u>01203520.00</u>      BORING / WELL NUMBER: <u>5C52</u></p> <p>SITE: <u>\$ Mission Bay Landfill</u>      CLIENT: <u>City of San Diego</u></p> <p>COUNTY &amp; PERMIT #: <u>LMON102307</u>      DATE OF INSTALLATION: <u>9/14/84</u></p> <p>DRILLER: <u>WEST HAZMAT</u>      PREPARED BY: <u>KLE</u></p>	<p style="text-align: center;"><b>CONSTRUCTION DETAILS</b></p> <p>Surface Elevation <u>25.507</u> ft.</p> <p>Top of Casing Elevation <u>28.734</u> ft.</p> <p>A. Total Depth <u>36</u> ft.</p> <p>B. Boring Diameter <u>8</u> in.</p> <p>C. Casing Length <u>38.5</u> ft.</p> <p>Casing Material <u>Sch. 40 PVC</u></p> <p>D. Casing Diameter <u>2</u> in.</p> <p>E. Depth to Top of Screen <u>15</u> ft.</p> <p>F. Screen Length <u>15</u> ft.</p> <p>Screen (slot) Size <u>0.010</u> in.</p> <p>G. Depth to top of Filter Pack <u>13</u> ft.</p> <p>Filter Pack Material <u>#2/12 Sand</u></p> <p>H. Depth to top of Seal <u>10</u> ft.</p> <p>Seal Material <u>HYDRATED BENT. CHIPS</u></p> <p>I. Depth to Top of Fill Material <u>3</u> ft.</p> <p>Annular Fill Material <u>BENT GROUT</u></p> <p>J. Surface Seal Dimensions <u>3</u> ft.</p> <p>Radial or Square or Other <u>RADIAL</u></p> <p>Surface Seal Material <u>CONCRETE</u></p> <p>K. Type and Size of Protective Casing: <u>8" DIAMETER STICKUP</u></p> <p>Notes or comments: <u>5 BAGS OF SAND</u> <u>1 BAG OF BENT. CHIPS</u> <u>1 BAG OF BENT. GROUT</u> <u>15 BAGS OF CONCRETE</u></p>
<p>Sketch the stratigraphic section from your boring log beside the well construction diagram.</p>	<p>Prepared by: <u>KEITH ETCHELLS</u>      Date: <u>9/14/04</u></p> <p>Reviewed by: <u>Terna Melloe</u>      Date: <u>9/27/84</u></p>

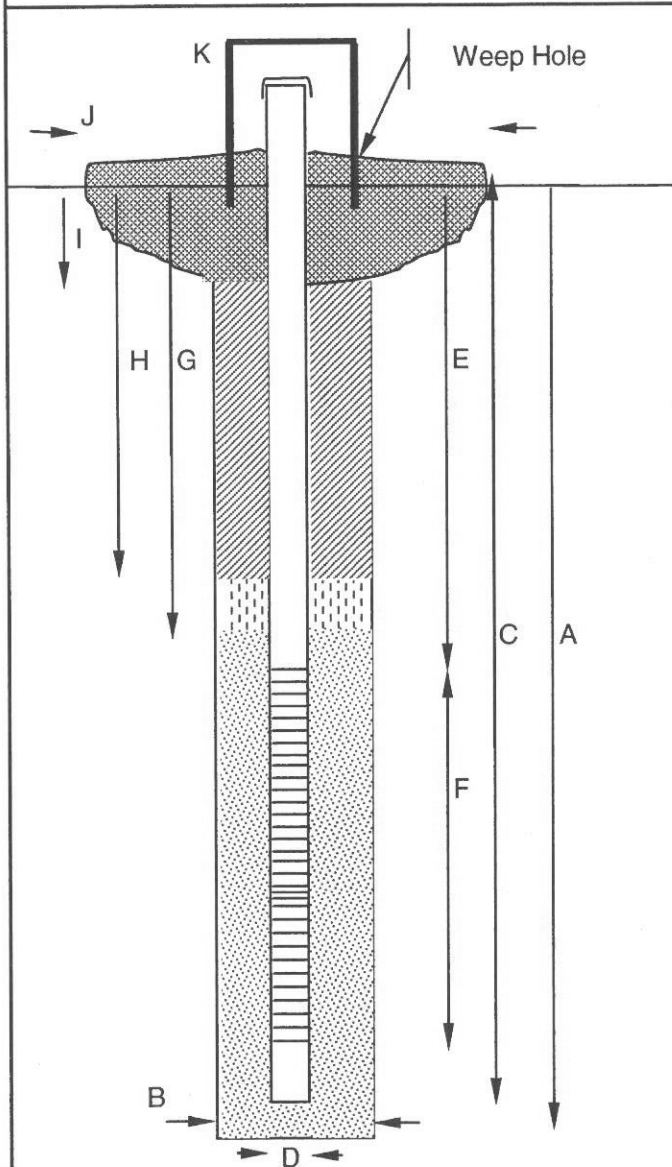
# MONITORING WELL CONSTRUCTION DETAILS

Standard Operating Procedure Number 4, Figure 1  
Revision A. 2/11/00



## STAND PIPE or RISER WELL

PROJECT NUMBER: 01203520.00 BORING / WELL NUMBER: SCS3  
SITE: MBLF CLIENT: City of San Diego  
COUNTY & PERMIT #: LMO107307 DATE OF INSTALLATION: 9/13/04  
DRILLER: WEST HAZMAT PREPARED BY: KLE



Sketch the stratigraphic section from your boring log beside the well construction diagram.

### CONSTRUCTION DETAILS

Surface Elevation 19.046 ft.  
Top of Casing Elevation 70.866 ft.  
A. Total Depth 31 ft.  
B. Boring Diameter 8 in.  
C. Casing Length 32.75 ft.  
Casing Material Sch. 40 PVC  
D. Casing Diameter 2 in.  
E. Depth to Top of Screen 10.75 ft.  
F. Screen Length 15 ft.  
Screen (slot) Size 0.010 in.  
G. Depth to top of Filter Pack 8 ft.  
Filter Pack Material #2/12 Sand  
H. Depth to top of Seal 5 ft.  
Seal Material Hydrated bent. chips  
I. Depth to Top of Fill Material 0 ft.  
Annular Fill Material Concrete  
J. Surface Seal Dimensions 3 ft.  
Radial or Square or Other Radial  
Surface Seal Material Concrete  
K. Type and Size of Protective Casing:  
8" DIAMETER STICKLIP

Notes or comments:

5 bags of Sand  
1 bag of bent. chips  
16 bags of concrete

Prepared by: KENTH ETCHELS Date: 9/13/04

Reviewed by: Tennant Date: 9/27/04

# MONITORING WELL CONSTRUCTION DETAILS

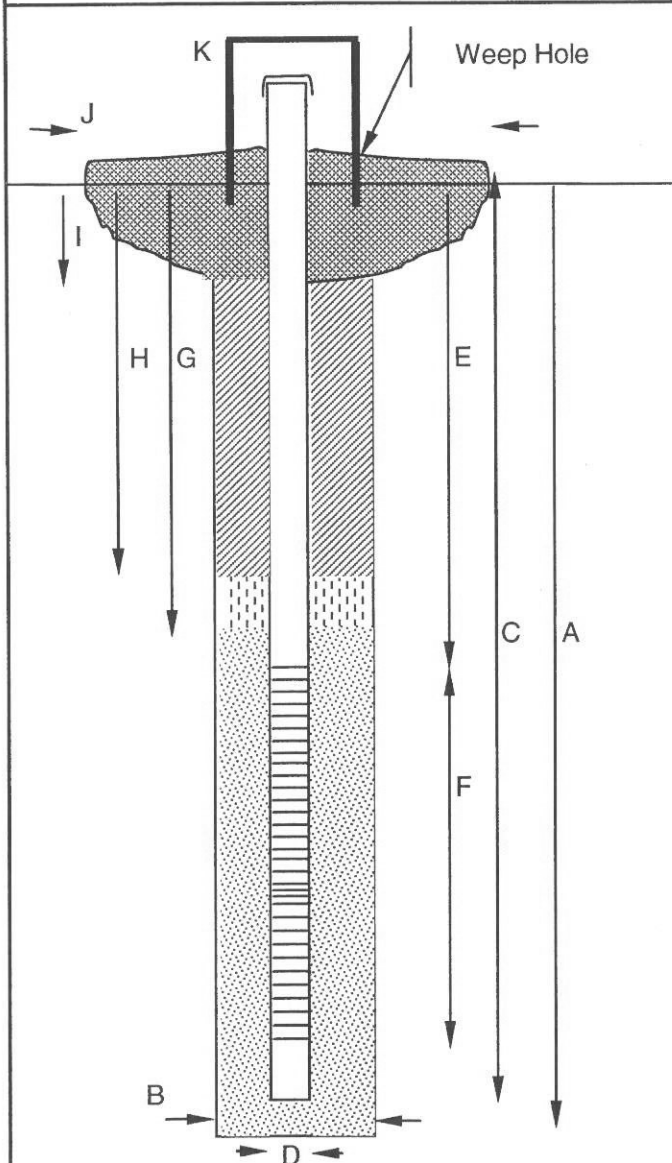
Standard Operating Procedure Number 4, Figure 1  
Revision A. 2/11/00



## STAND PIPE or RISER WELL

PROJECT NUMBER: 01203520.00  
SITE: MISSION BAY LANDFILL  
COUNTY & PERMIT #: LMO1102307  
DRILLER: WEST HAZMAT

BORING / WELL NUMBER: SCS4  
CLIENT: CITY OF SAN DIEGO  
DATE OF INSTALLATION: 9/14/04  
PREPARED BY: KLE



Sketch the stratigraphic section from your boring log beside the well construction diagram.

### CONSTRUCTION DETAILS

- Surface Elevation 20.183 ft.
- Top of Casing Elevation 23.165 ft.
- A. Total Depth 31 ft.
- B. Boring Diameter 8 in.
- C. Casing Length 33.5 ft.
- Casing Material Sch. 40 PVC
- D. Casing Diameter 2 in.
- E. Depth to Top of Screen 10.35 ft.
- F. Screen Length 15 ft.
- Screen (slot) Size 0.010 in.
- G. Depth to top of Filter Pack 8 ft.
- Filter Pack Material #2/12 SAND
- H. Depth to top of Seal 5 ft.
- Seal Material HYDRATED BENT. CHIPS
- I. Depth to Top of Fill Material 0 ft.
- Annular Fill Material CONCRETE
- J. Surface Seal Dimensions 3 ft.
- Radial or Square or Other RADIAL
- Surface Seal Material CONCRETE
- K. Type and Size of Protective Casing:  
8" DIAMETER STICKUP

Notes or comments:  
5 BAGS OF SAND  
1 BAG BENT. CHIPS  
16 BAGS OF CONCRETE

Prepared by: KEITH ETCHES

Date: 9/14/04

Reviewed by: Iena Nabe Date: 9/27/04